

**From:** Separation Science e-Learning <noreply@sepscience.com>  
**Sent:** Friday, November 02, 2012 1:26 PM  
**To:** Hanchett, James (DPH)  
**Subject:** Today in Separation Science - Latest Issue now Available



[Web Version](#) [Forward](#) [Unsubscribe](#)

e-Learning Update

## Separation Science

### IN THIS ISSUE

- [QuEChERS: A Primer](#)
- [Analytical Techniques in Food Safety and Quality](#)
- [Rapid Ultra High Performance Liquid Chromatography Method Development Through Proper Column Selection](#)
- [Sample Preparation Optimization](#)
- [Featured Applications](#)
- [Upcoming & On Demand Webinars](#)



#### QuEChERS: A Primer

Quick, Easy, Cheap, Effective, Rugged and Safe, the QuEChERS (pronounced "catchers") method is based on work done and published in 2003 by Anastassiades et al. QuEChERS was developed as an extraction method for pesticides in fruits and vegetables, coupled with a cleanup method that removes sugars, lipids, organic acids, sterols, proteins, pigments and excess water. QuEChERS involves two simple steps: first, a homogenized sample is extracted and partitioned using an acetonitrile and salt solution, then, the supernatant is cleaned using a dispersive solid-phase extraction (dSPE) technique. This QuEChERS approach offers a user-friendly alternative to traditional liquid-liquid and solid-phase extractions.

[Click for PDF>>](#)

#### Analytical Techniques in Food Safety and Quality

In this era of globalization in which the food supply knows no boundary, consumers are increasingly interested in the safety, quality and authenticity of everything they purchase. Recent alerts reported in the media regarding food imports from specific countries have put sharp focus on the identification of origin as a first step in ensuring food safety.

[Click for PDF>>](#)

#### Rapid Ultra High Performance Liquid Chromatography Method Development Through Proper Column Selection

This article describes the importance of selecting an optimal column stationary phase, by demonstrating changes in selectivity of various types of samples including synthetic mixtures, forced degradation reactions and natural product extracts across different columns. This work demonstrates how improved separations can be developed in less time by systematically screening different sub 2 µm column chemistries early in the method development process.

[Click for PDF>>](#)

#### Sample Preparation Optimization

The analysis of drugs in biological fluids presents the modern analytical chemist with many challenges. One of the most common fluids that is routinely analysed is plasma. This matrix is incredibly complex with thousands of components ranging from very complicated structures such as high molecular weight proteins to simple inorganic salts. Another complication is that each sample will be different as the relative amount of proteins, inorganic molecules and small organic molecules will differ dependent on the time of day, the state of the patient, and indeed what food the patient has taken. Additionally, the sample itself will change with time, as proteins denature, and other components of the matrix may also degrade, either due to thermal effects or due to radiation effects. This presents substantial challenges to the analytical chemist as clearly the sample will be changing from one injection to the next. The analytical system itself is also changing! from one injection to the next, which adds further complexity to the analysis as this article will demonstrate.

[Click for PDF>>](#)

### FEATURED APPLICATIONS

**Dramatically Improve Existing 5 µm and 3 µm Fully Porous Methods with Kinetex 5 µm Core-shell Technology**  
Phenomenex  
[Click to read>>](#)

**A Comprehensive Automated Screening Method for Synthetic Cannabinoids in Serum Using the Toxtyper Solution**  
Bruker  
[Click to read>>](#)

**Qualitative Analysis of Coconut Water Products using Stir Bar Sorptive Extraction Combined with Thermal Desorption-GC/MS**  
Gerstel  
[Click to read>>](#)

**Agilent 1290 Infinity LC System – Applications requiring the Agilent Ultra-Low Dispersion Kit**



### UPCOMING WEBINARS

**Trouble-free Food Testing: Easy Technologies to Improve Uptime and Productivity**  
Date: 6th November, 2012  
Presenters: Jason Link & Mike Chang  
[Click here>>](#)

**Why Inertness Matters in Gas Phase Analyses**  
Date: 7th November, 2012  
Presenter: Ken Lynam  
[Click here>>](#)

**Game-Changing Performance from Bruker's EVOQ Liquid Chromatography Triple Quadrupole (LC-TQ) Mass Spectrometers**  
Date: 14th November, 2012  
Presenter: Jim Edwards  
[Click here>>](#)

**Developments in High-throughput Multi-residue Pesticide Analysis using Fast Chromatography Coupled with Mass Spectrometric Detection**  
Date: 20th November, 2012  
Presenter: Dr Neil J. Schroeder  
[Click here>>](#)

### ON DEMAND WEBINARS

**How to get Rugged Results in Pesticide Analysis using Triple Quadrupole GC-MS/MS?**  
Presenter: Dr Katerina Mastovska  
[Click here>>](#)

**Pesticide Screener: A Comprehensive Approach to Multi-Target Pesticide Screening Using LC- Time-of-Flight Mass Spectrometry**  
Presenter: George McLeod  
[Click here>>](#)

**Using Variations in Solid Core Particle Diameter and Pore Size to Improve UHPLC and HPLC Separations**  
Presenter: Stephen Luke  
[Click here>>](#)

**Agilent Technologies**  
[Click to read>>](#)

**Molar Mass and Chemical Composition 2D Analysis for Thermoplastic Elastomers**  
**PSS**  
[Click to read>>](#)

**Analysis of Pesticides by QuEChERS – Application of Z-Sep Family of Sorbents for Cleanup**  
**Sigma Aldrich / Supelco**  
[Click to read>>](#)

**Determination of Nitrite and Nitrate in Wastewater Using Capillary IC with UV Detection**  
**Thermo Fisher Scientific**  
[Click to read>>](#)

**Separation of clindamycin phosphate and process impurities**  
**Knauer**  
[Click to read>>](#)

**High Speed and Resolution SEC Analysis of mAbs Using TSKgel SuperSW mAb columns**  
**Tosoh**  
[Click to read>>](#)

**Analysis of Valsartan**  
**GL Sciences**  
[Click to read>>](#)

Published by Eclipse Business Media Ltd  
Frederick House | Princes Court | Beam Heath Way | Nantwich | Cheshire CW5 6PQ | United Kingdom  
20 Maxwell Road | #09-17 Maxwell House | Singapore 069113

Copyright © 2012 Eclipse Business Media Ltd. All rights reserved.

To sponsor or advertise in this e-newsletter contact [dean.grimes@sepscience.com](mailto:dean.grimes@sepscience.com)  
For editorial contributions contact [david.fell@sepscience.com](mailto:david.fell@sepscience.com)

This message was sent from Separation Science e-Learning to [james.hanchett@state.ma.us](mailto:james.hanchett@state.ma.us). It was sent from: Eclipse Business Media Ltd, Frederick House, Princes Court, Beam Heath Way, Nantwich, Cheshire CW5 6PQ, United Kingdom. You can modify/update your subscription via the link below.



[Unsubscribe](#)